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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,396

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Jae-Hoon Tae

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EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,396	Applicant(s) TAE ET AL.	
	Examiner Benny Lee	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9, 25-30; 13-17; 18-23 is/are allowed.
- 6) ☒ Claim(s) 10 is/are rejected.
- 7) ☒ Claim(s) 11, 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>28 August 2008</u> . | 6) <input type="checkbox"/> Other: _____ |

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 August 2008 has been entered.

The following claims have been found to be objectionable for reasons set forth below:

In claim 2, lines 4, 8; claim 6, line 3; claim 25, lines 4, 7: note that “on the same plane” should be rephrased as --on a common plane-- for an appropriate characterization.

In claim 10, penultimate line, note that “phase of ...” appears to be an incomplete recitation and should be appropriately rewritten.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by the Takashi et al reference (of record).

Regarding claim 10, the Takashi et al reference discloses a power dividing means (e.g. at the far left side of the Fig. 1 structure) which receives an input signal at an input port and splits the input signal into first and second output signals. Note that the second output signal is of a fixed phase value, which is outputted at a corresponding output port. Note that the first output signal from the dividing means is further split into third and fourth divided signals (i.e. at the upper junction of the dividing means). Note that each one of the third and fourth signals are fed

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into corresponding phase shifters (e.g. 3B, 4B) and includes a phase shift of the signals which is dependent on the path length (i.e. by virtue of the position of the respective wiper arm in the corresponding phase shifter (e.g. 3B, 4B).

Applicants' arguments filed 28 August 2008 have been fully considered but they are not persuasive.

With respect to the rejection of claim 10 based on Takashi, applicants' contend that the phase shifter lacks power dividing means and there is no output for outputting the fixed phase value in Takashi. It is asserted that in Takashi that the second divided signal is coupled to the antenna element. Moreover, it is asserted that the recited "path length" is different than the "wiper length", which is contrary to the claimed recitation of the divided signal being based on the "path length".

In response, contrary to applicants' assertion, in Takashi there is indeed a dividing means (e.g. at the far left side of Fig. 1), which divides a received input signal into a second fixed phase shift value, which is coupled to an output port at an antenna (i.e. 1e) and a first variable phase shift signal (i.e. via the upper junction of the dividing means). As for the phase of the variable signals being based on the "path length" of the signals, applicants' contention that the "wiper length" is different from the "path length" has been considered, but found unpersuasive. The examiner can not find any distinction between the "wiper length" and the "path length". In fact, it would appear that the "wiper length" would have directly determined the "path length". That is to say, the position of the wiper would directly affect the path length the signal travels in one of the divided paths as compared to the path length that the signal travels in another one of the divided paths. For example, in wiper 4B, for the position depicted (i.e. the wiper length), the path

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length that the signal travels along the upper divided path to antenna (1c) would be different from the path length that a signal travels along the lower divided path to antenna (1g).

Accordingly, it would stand to reason that the “wiper length” does indeed affect the “path length”, such as claimed.

Claims 11, 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Claims 1-9, 25-30; 13-17; 18-23 are allowable over the prior art of record.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

**/BENNY LEE/
PRIMARY EXAMINER
ART UNIT 2817**

B. Lee